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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,171	07/28/2003	Annette C. Grot	10004269-1	5594

7590 12/02/2005
AGILENT TECHNOLOGIES, INC.
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Intellectual Property Administration
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EXAMINER

DOAN, JENNIFER

ART UNIT PAPER NUMBER

2874

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Supplemental
Notice of Allowability**

Application No.

10/628,171

Examiner

Jennifer Doan

Applicant(s)

GROT ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an interview filed on November 2, 2005.
2. ☒ The allowed claim(s) is/are 1-4,6-9,11-16 and 18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Jennifer Doan
11/15/05

EXAMINER'S AMENDMENT AND STATEMENT OF REASONS FOR ALLOWANCE

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Gerald H. Glanzman on November 2, 2005.

The application has been amended as follows:

In line 10 of claim 1, after "first and second optical waveguides into the optical coupler," please insert - -the first refractive index having been increased by exposure to the overlapping cones of light- -.

In line 8 of claims 6 and 7, after "ends of the optical waveguides into the material," please insert - -an index of refraction of the waveguide region having been increased by exposure to the overlapping cones of light- -.

In line 9 of claim 9, after "the material included in the waveguide region has a first refractive index" please insert - -having been increased by exposure to the overlapping cones of light- -.

In line 11 of claim 6, please change "a refractive index greater than" to - -the refractive index greater than- - (in order to give proper antecedent basis for the claimed limitations of claim 6).

In line 18 of claim 7, please change "a refractive index greater" to - -the refractive index greater than- - (in order to give proper antecedent basis for the claimed limitations of claim 7)..

Reasons for allowance

2. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose or suggest a method for aligning optical waveguides and an apparatus of an optical waveguide device comprising an optical coupler extending across the gap between the first ends of the first and second optical waveguides, the optical coupler including a waveguide region and a region surrounding the waveguide region, the waveguide region having a first refractive index and a shape that diverges from the first end of each of the first and second optical waveguides as defined by overlapping cones of light emitted from the first ends of the first and second optical waveguides into the optical coupler, wherein the first refractive index has been increased by exposure to the overlapping cones of light in combination with the other limitations of claims 1 and 11.

Claims 2, 3 and 8 depend from claim 1.

Claims 13-15 and 18 depend from claim 11.

The prior art of record also fails to disclose a method for aligning optical waveguides and an apparatus of an optical waveguide device comprising an optical coupler extending across the gap between the first ends of the waveguides, the optical coupler comprising material including a waveguide region, the waveguide region having

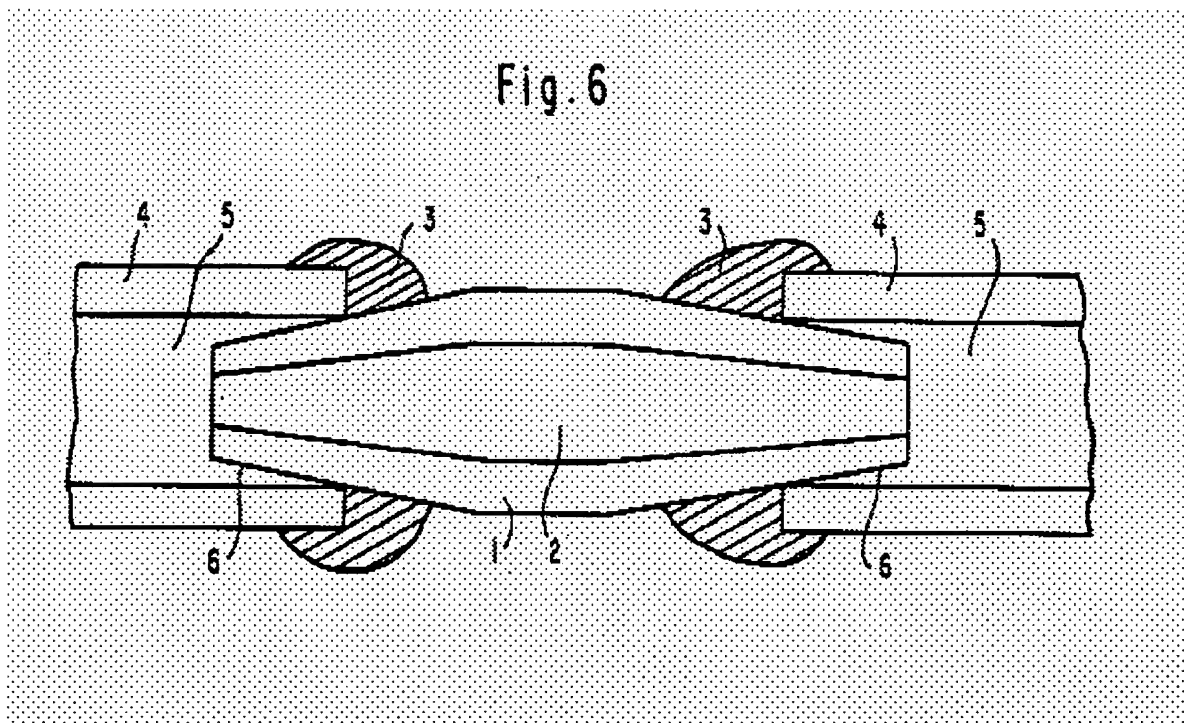
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a shape defined by overlapping cones of light emitted from the first ends of the optical waveguides into the material; wherein the material undergoes cross-linking by one of one-photon absorption and two-photon absorption in combination with the other limitations of claims 4 and 16.

The prior art of record also fails to disclose an optical waveguide device comprising an optical coupler extending across the gap between the first ends of the waveguides, the optical coupler comprising material including a waveguide region, the waveguide region having a shape defined by overlapping cones of light emitted from the first ends of the optical waveguides into the material, wherein an index of refraction of the waveguide region having been increased by exposure to the overlapping cones of light in combination with the other limitations of claims 6, 7 and 9.

The prior art of record also fails to disclose a method for aligning optical waveguides, the method comprising the steps of axially aligning the first and second optical waveguides leaving a gap between adjacent ends of the aligned waveguides; exposing the material to conical beams of light emitted from the adjacent ends of the waveguides, the exposing increasing the refractive index of the material in a region in which the beams of light overlap and uniformly exposing the material to light of an intensity less than the intensity in the region in combination with the other limitations of claim 12.

The newly cited reference, Dyott et al. (U.S. Patent 3,900,245) (figure 6) disclose an apparatus comprising a first optical waveguide having a first end; a second optical waveguide having a first end, the first ends of the first and second optical waveguides being separated by a gap (see figure 6) and an optical coupler extending across the gap between the first ends of the first and second optical waveguides (column 1, lines 33-37), the optical coupler including a waveguide region (2) and a region (1) surrounding the waveguide region (2), the waveguide region having a first refractive index and a shape that diverges from the first end of each of the first and second optical waveguides as defined by overlapping cones of light emitted from the first ends of the first and second optical waveguides into the optical coupler (see figure 6 and column 2, lines 12-13). However, the Dyott reference does not specifically disclose an apparatus of an optical waveguide device comprising the waveguide region including a refractive index having been increased by exposure to the overlapping cones of light.



Claims 1-4, 6-9, 11-16 and 18 are therefore allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00am to 3:30pm, second Friday off.

4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent examiner

November 15, 2005